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Hypnosis--Unpublished reports for the United States Air Force
by LW, 1952-1953.

AFR 80-22 Department of the A.F. 11 July 1952 RESEARCH AND DEVELOPMENT: Clinical Research

1. Purpose and Scope. This Regulation establishes a program and prescribes the policies, procedures, and responsibilities for sponsoring and supporting clinical research at Air Force hospitals, dispensaries, and other clinical medical facilities. It is applicable to all Air Force medical activities and facilities.

2. Policy. The Air Force policy is to encourage and support clinical research by officers of the Medical Service, USAF, at any Air Force medical facility for the purposes of improving patient care; improving clinical techniques; and increasing the efficiency of the Medical Service, USAF. To this end, services of consultants, publication services, funds, or special items of equipment will be made available through the USAF School of Aviation Medicine to support approved research.

3. Definition. Any research proposal is eligible for support which promises to improve Air Force medical care, including examination, diagnosis, treatment, and care, establishment of new procedures or development of new equipment, modification of existing methods, and hospital or field testing of methods or equipment. Such research must be performed by or in association with medical, dental, nurse, veterinary, or medical service officers as a byproduct of their regular duties. No additional personnel will be authorized the initiating activities to support such research.

4. Responsibility: a. The "initiating officer", who is authorized to communicate direct with the Commandant, USAF School of Aviation Medicine, will describe the need for the proposed investigation, search the scientific literature for related studies, and prepare a proposed research design and project proposal.

b. The base surgeon or officer in charge of the facility will be the "responsible officer." He will make every effort to maintain progress of approved investigations; he will insure that regular activities of his facility are not impaired; and he will be responsible for utilizing equipment and expending funds allotted to the investigation. If the initiating officer is transferred, the responsible officer will designate a new "principal investigator" to carry on the investigation.

c. The USAF School of Aviation Medicine will provide funding and monitorship over the program and each investigation.

5. Procedure: a. The responsible officer will communicate direct with the Commandant, USAF School of Aviation Medicine, Randolph Air Force Base, Randolph Field, Texas, using the subject title, "Proposal for Clinical Research, AFR 80-22". The proposal, in original and 5 copies, will contain the following information:

- (1) Statement of the problem.
- (2) Requirement, in terms of Air Force needs, which justifies the investigation.
- (3) Brief summary of the background of the investigation including major references to related research and a statement of the expected improvement in the Medical Service, USAF.
- (4) Research design, which should be as detailed as possible, with description of methods to be used, controls, size of sample, and other information needed for adequate evaluation by experienced scientists.
- (5) Name, grade, and title of responsible officer, principal investigator, and other investigators, as well as information regarding advanced training, publications, and so on.
- (6) Facilities, both required and available, for the proposed ~~xxx~~ research, to include experimental subjects.
- (7) Items of nonstandard equipment to be provided by the USAF School of Aviation Medicine, with approximate cost and suggested source.
- (8) Total estimated cost.
- (9) Duration and time phasing of proposed investigations. Investigators will be encouraged to design research projects that can be completed in less than 1 year.

b. The research proposal will be evaluated by the Research Council of the USAF School of Aviation Medicine which will notify the responsible officer of approval or disapproval of the investigation or will suggest modification and resubmission of the proposal.

c. Research proposals, when approved by the Research Council of the USAF School of Aviation Medicine, will be classified as projects or tasks as defined in AFR 80-15.

Projects will be approved by higher headquarters in accordance with AFR 80-20. When classified as a task of a previously approved project, the action of the Research Council will be considered final.

d. Those investigations approved may be aided with funds to the extent available and/or with special items of equipment. Such funds and items of equipment will be utilized solely to carry out the approved researches of the projects.

e. The USAF School of Aviation Medicine will provide all necessary research and development project data to the Commanding General, Air Research and Development Command, in accordance with AFR 80-7.

6. Funds. Funds may be made available to the medical officer in charge of the facility where the research is to be accomplished by AF Form No. 405, "Obligation Authority," citing the fund account to be obligated and stipulating the purpose of expenditures, amounts and time limits. No funds will be made available for hiring additional personnel or for travel nor will there be any prorating of personnel costs between two or more fund areas. Responsible officers or investigators will not enter into contractual agreements with outside agencies for purposes of performing portions of the investigation under the provisions of this Regulation. Contracts may be let only with the approval of the USAF School of Aviation Medicine.

7. Equipment. Nonstandard and special items of equipment may be purchased by the USAF School of Aviation Medicine and shipped to the using activity. All items of equipment procured under the provisions of this Regulation will be transferred to the USAF School of Aviation Medicine, at its direction, upon completion or termination of the research.

8. Scientific Reports. Research accomplished will be included in the technical reports of the USAF School of Aviation Medicine and recognition will be accorded both author and organization where the research was accomplished. Subsequent publication in military or civilian professional journals will be encouraged. Progress reports will be submitted as required by the USAF School of Aviation Medicine.

By Order of the Secretary of the Air Force:

N. F. TWINING
Acting Chief of Staff
United States Air Force

Official:

K. E. THIBAUD
Colonel, USAF
Air Adjutant General

HYPNOSIS IN SURGERY

Louis J. West, Major USAF(MC)

The current issue of "Newsweek" magazine tells us of the primitive conditions of emergency surgical practice in the North Korean prison camps. Here various procedures were undertaken without benefit of anesthesia; the patient received a stick to bite on for his pain. Hearing of this, one cannot help recalling the ^{published} experiences of two Australian surgeons in the Japanese prison camps during World War II. Facing the necessity to undertake surgery without anesthesia, they utilized hypnosis as a means of providing some measure of freedom from pain. They were astonished at the success of the method, and their report lists a surprising variety of painless operations.

Those familiar with the history of medical hypnosis will not be surprised to find surgeons employing it again, since there is evidence ^{that} the Greek, Persian, Hindu and Egyptian surgeons were familiar with ~~this device~~ ^{it} in the times before Christ. It was a ~~surgeon~~ Manchester surgeon, James Braid, who first clearly defined "Mesmerism" or "animal magnetism" as a psychological phenomenon having nothing to do with electricity or special devices. It was Braid who coined the term "hypnosis" and who first recommended ^{the use of hypnotism} it to fellow-surgeons in England. In 1842 he offered to read a paper on the subject before the British Medical Association which was to meet in Manchester, ^{The offer} was refused. In the same year another surgeon, Squire Ward, presented a paper before the Royal Medico-Chirurgical Society of London, describing a number of amputations performed painlessly on hypnotized patients. The paper was branded as ridiculous, as were Braid's reports of curing cases of contractures and deafness. About the same time ~~the physician~~ Elliotson, professor ~~of~~ at the University College Hospital, was asked to resign his post because he chose hypnosis as ^{his} subject for the ~~annual~~ Harveian Oration of 1846. He left the College and founded a journal called "The Zoist" which dealt with hypnotism and cerebral physiology. Under his influence a number

"Mesmeric Institutions" were formed in various parts of the British Isles. At the Institution at Exeter, Parker performed over 200 painless operations.

Meanwhile a British Surgeon in India, James Esdaile, was performing literally thousands of operations upon hypnotized patients. His reports included 300 major surgical procedures including 19 amputations, and a governmental investigating committee (which they had even in those days) returned a favorable report on his work. Esdaile claimed that his patients offered no complaint of pain, lay quietly and apparently asleep during the surgery, and were often quite surprised to discover (upon awakening) that the operation was all over. Esdaile also reported that his patients failed to show ~~changes in~~ physiological changes usually associated with pain; they did not wince, ~~they~~ pulse and respiration were unchanged, and even pupillary dilatation did not occur. Most important to the average surgeon of those days was the fact that one did not need to tie the patient with strong ropes, get him drunk with brandy, give him a bullet to bite, and then have eight stout men to hold him still, during the surgical procedure.

The considerable upsurge of interest in hypnotism among surgeons of the 1830's and 1840's quickly subsided with the general ~~acceptance~~ of chemical anesthetic agents, and interest has only recently been revived. But it is interesting for a psychiatrist addressing a surgical group to be able to point out that it was a group of British surgeons who did the work which led directly, through the development of hypnotism, to the later development of the psychoanalytic theories of Sigmund Freud, ~~and at the same time it was the development of~~ ^{hypnotic anesthesia which} ~~drew attention to the~~*

Before surveying the current clinical practice of medical hypnosis as it affects the surgeon, it may be helpful to review some of the experimental studies which have ~~recently~~ led to a ^{greater} understanding of the way in which the pain experience is affected by hypnotic suggestions. In 1951 ~~the physiologist James Hardy and Karleen Niebla~~ a controlled investigation of this problem ^{was undertaken} at Cornell Medical Center. Normal subjects were utilized, and they were studied in all stages of the hypnotic state. Measured amounts ~~extinction~~ of noxious stimulation were administered with the Hardy-Wolff-Goodell pain machine, sometimes called the "dolorimeter", and quantitative reports of pain experience were given by the subjects who were trained in terms of * possibility of painless surgery, and paved the way for chloroform and ether. To report

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the "dol" scale. The "dol" is a unit of painfulness, and the entire scale of pain intensity, from threshold to maximal painfulness, encompasses 10 1/2 "dols". In this study changes in pain threshold were ~~not~~ measured. Alterations in the individual's ability to distinguish between pains of differing intensity were also noted. In order to measure in some way the ~~physiological~~ emotional and physiological reactions to the various painful stimuli, quantitative records of galvanic skin response to painful stimuli were obtained during the control and hypnotized states.

- (1) THE FIRST SLIDE is a diagram of the experimental arrangement. Data were collected at 45 experimental sessions, during which a total of 478 stimuli were administered, varying in intensity from threshold pains to blister-producing levels. At each session the ~~subject~~ subject's sensations and responses to stimuli during ~~xx~~ a control period were compared with sensations and responses to identical stimuli administered following hypnotic suggestions of anesthesia. Depth of hypnotic trance was classified as light, medium, or deep at each session, according to a number of standard criteria.
- (2) THE SECOND SLIDE illustrates the effects of the hypnotic suggestions of anesthesia upon a person in a very light hypnotic trance. The suggestions had no effect upon the pain threshold, but stimuli of higher intensity seemed less painful when the subject was hypnotized than when he was awake. // (Pause) //
- (3) NEXT THE ~~THIRD~~ SLIDE shows the different experiences of a patient who usually entered a light trance but who on several occasions was brought into a medium trance. When (or, more accurately, hypalgesia) in a light trance she had a hypesthesia of moderate degree ~~point~~ // (point) // but in a medium trance there was complete analgesia for all stimuli administered. Those ~~subjects~~ entering a deep trance invariably experienced analgesia; those in a medium trance nearly always so. When complete analgesia was not achieved, a marked degree of hypalgesia was seen, with considerable elevation of the pain threshold, so that an intense stimulus might be just barely perceived, and perhaps identified as a threshold pain.
- (4) THE NEXT SLIDE SHOWS SUCH A CASE // (pause and point) //.
- (5) THE LAST SLIDE SHOWS a summary of the results of the ~~xx~~ experiment. ~~xxxxxx~~ The critical ratios in the last column, when translated into terms of t ratios, give the data in each case a degree of confidence better than .01. It is of great

anesthetic

Interest to note that in subject number one, where there was never any effect that the subject could report as a result of hypnotic suggestions, nevertheless there was a definite reduction in the galvanic skin response, or PGR (psychogalvanic reflex). Since this is a measurement of sympathetic nervous activity, it is clear that the suggestions were affecting the subject's unconscious and reflex responses to the painful stimuli which consciously and subjectively hurt him just as much. It has been postulated ~~maximally~~ that this indicates an alteration in the "threat-content" of the painful stimulus, and corresponds to the clinical observation that there may be considerable variation in responses to pains of presumably equal intensity (The presence ^{on the slide} ~~of~~ question marks after "anesthesia" ^{The word} ~~which was achieved~~ in the various cases merely indicates that intensities of over 7 dols were not used for fear of producing serious skin damage. There was anesthesia for all stimuli administered in those cases.)

On the basis of these experiments it was possible to conclude that hypnotic suggestions of anesthesia influence pain perception by causing elevation of pain threshold, hypalgesia, and analgesia. There was a general correlation between depth of trance and the degree to which pain perception was altered by hypnotic suggestions; the deeper the hypnotic trance, the greater the anesthesia. The galvanic skin response to noxious stimulation was diminished, and it sometimes disappeared, ~~as a result of hypnotic suggestion~~ completely. ~~Usually it was diminished~~ ~~response was affected even when there was no alteration in pain perception.~~

This experiment is described in some detail to indicate the type of research which can be done to further our knowledge in this field. But pain is by no means the only aspect of the physiology of hypnosis which has been under scrutiny. In an excellent review by Gorton ~~recently~~, there are descriptions of many investigations of the ~~degree to which~~ effects of hypnotic suggestions ~~can influence~~ described upon heart rate, respiration, gastric activity, salivary flow, and other functions. Various reports clearly show that blisters and wheals can be produced by hypnotic suggestion alone. Conversely, wheals due to ~~allergen~~ injection of known allergens can be substantially reduced by suggestions, and warts have ^{often} been ~~successfully~~ treated successfully by suggestion. Some rather remarkable observations attending the phenomenon of hypnotic age-regression have recently been documented. Appearance of positive

Babinsky signs with corresponding changes in peripheral chronaxie have been recorded in subjects who were regressed to an infantile level. A normal EEG was produced in an epileptic when he was regressed to an age antedating the onset of his epilepsy, and spikes appeared once again when he was "brought back to the present". Many of these ~~reports~~ ^{reports} are ~~merely~~ sources for skeptical inquiry. But there can be little doubt that hypnosis offers us ~~a~~ most promising tool for investigation of psychosomatic phenomena, for laboratory reproduction of ^{normal and} abnormal emotions and their corresponding bodily changes, and for obtaining leads for more effective treatment of these conditions.

Having given this much consideration to the experimental background, ~~nowhere~~, let us consider in a general way the clinical applications of hypnosis in medical practice today, with particular attention to the surgical specialties.

As we have already noted, the relationship between hypnosis and anesthesiology is an ancient and honorable one, and there are a number of interesting reviews of this topic. Hollander gives a long list of criteria whereby hypnotic anesthesia is superior to chemical anesthesia. Raginsky has recently brought the topic up to date ~~from a clinical point of view~~ in a general way. The chief objections continue to be that ~~it is~~ only about half of the population can be brought to a depth of hypnosis suitable for extensive surgical procedures, that the method is time-consuming, ^{and} that skilled hypnotic operators are scarce. ~~Nevertheless~~ Nevertheless situations can be expected to arise in the experience of most surgeons when it would be helpful, or interesting, or even vital, to be able to produce anesthesia by means of hypnosis. Such situations can occur when chemical anesthesia is medically contraindicated, or when it is not available, or when for some reason it is not desirable.

~~R~~ ~~It was the author's good fortune to~~ ^{was performed} participate in ~~A~~ relatively controlled clinical experiment in this regard, at the University of Iowa Hospital in 1944. Two ~~dearly~~ adult males were admitted to the urology service for circumcisions because of severe ~~phimosis~~ ^{complicating} phimosis with the usual painful symptoms. One patient had been a volunteer subject in an experiment with hypnosis, and asked to have his operation under hypnotic anesthesia. After the doubts of the surgeon were overcome ~~overcome~~ ^{overcome} by a brief demonstration of hypnotic anesthesia, the two individuals

circumcized in different operating rooms at the same time. The control patient received the usual premedications consisting of a sedative and an opiate; local anesthesia was employed utilizing novocaine. The administration of the local anesthetic was in itself quite painful for ~~this~~ patient; he appeared in some distress during the operation, and post-operatively, had a most painful ~~pain~~ ^{72 hours} ~~for~~, with complaints of ~~experiencing~~ pain ^{after} the anesthetic wore off, necessitating further medication which gave only partial relief. He was in bed for 3 days post-operatively and was not comfortable for a week. There was a fair amount of post-operative swelling and ~~inflammation~~ edema of the penis.

It was the author ~~who performed~~ served as anesthetist for the other patient. No preoperative medication was used. The patient was put into a deep trance and suggestions of anesthesia were made. This took less than five minutes. The suggestions were briefly reinforced occasionally during the operation. The patient ~~had~~ ^{was} never flinched or winced, and appeared to have no awareness of the surgical procedure. He carried on conversations on various topics, demonstrated other hypnotic phenomena such as age regression and hallucinations when the appropriate suggestions were made, and otherwise lay ~~asleep~~ ^{quietly relaxed}. Upon completion of the operation a suggestion was made that there would be post-hypnotic anesthesia of ~~the~~ ^{the} genital ~~area~~ for 12 hours, followed by a return of normal sensibility. ~~return~~

The patient walked back to his ward with no sign of discomfort. Nurses' notes revealed no complaints for a 12 hour period, at the end of which time he complained of slight local discomfort. He returned to his classes on the third post-operative day.

This example is quite typical of numerous occasions in ~~which~~ experience ^{subsequent} ~~my~~ ^{are rarely seen} that hypnotic anesthesia has been employed with complete success. Failures ~~are~~ ^{to improper selection of patients, or} and are usually due ^{to} to inadequate preoperative testing of depth of trance. As a rule it is safest to test for anesthesia with a really painful stimulus before proceeding with the surgery. In the case cited above, the test used was the sudden application of a surgical clamp to the foreskin.

Numerous ^{other} examples ~~can~~ might be selected from recent clinical experimentation at Lackland Air Force Base Hospital, particularly on the part of Col. Tarrow in anesthesiology, Capt. Mather in ophthalmology, and a group of dentists who have utilized hypnotic anesthesia to great advantage in a number of otherwise painful dental procedures, such as fillings, extractions, orthodontic adjustments, fracture

work involving application and removal of wires from the maxillary bone, scraping of dry sockets, and other procedures in oral surgery. In some cases hypnosis was used as an adjunct to usual local anesthetic methods which had proved unsatisfactory or inadequate.

Employment of hypnosis as an anesthetic in obstetrics and gynecology can be extremely helpful, and many uses are described by Kroger in recent publications. Certainly dysmenorrhea often yields to ~~hypnotism~~ symptomatic hypnotherapy when other methods have failed. ~~completely exhausted~~ It is ~~my~~ firm conviction that hypnotic anesthesia is, in suitable cases, the ideal ~~anesthesia~~ method in childbirth. ~~mother~~ There is maximum cooperation from the patient, maximum protection of the infant, and the ~~mother~~ can be offered freedom from pain with full recall of the experience in all other respects. The labor contractions can be perceived as contractions which are not painful. ^{of course} If the delivery suddenly becomes complicated, or if the anesthesia appears insufficient, chemical agents can be quickly brought into play. ^{(although this virtually never becomes necessary with a good subject).} The method of Grantley Dick Read, called "childbirth without fear", is not the same as hypnosis in any fundamental respect. ~~Everyone~~ I approves of the Read method, again in properly selected individuals, but ~~everyone~~ there should be ~~a~~ a clear understanding of the difference between the Read method and hypnotic anesthesia in childbirth.

Turning now from the subject of anesthesia, let us consider some of the other practical ~~xxxxxx~~ clinical uses for hypnosis. It is well known that fear can be a complicating factor in almost any clinical procedure, whether it be removing a foreign body from the eye, inserting a bronchoscope, obtaining a smooth induction of general anesthesia, obtaining a liver biopsy, performing a pelvic examination. The experienced clinician attempts to allay fear by his manner, through conversational distraction, reassuring suggestions, and so on. The utmost in relief from fear can be obtained through hypnotic suggestion, and often its employment will permit a considerable saving in time which would otherwise be spent in arguments, pleadings, and endless attempts at reassurance. A case in point was that of a young woman whose tenseness made complete pelvic examination impossible. It was deemed necessary to resort to general anesthesia in order to proceed. In two minutes she was placed in a medium hypnotic trance, ~~which permitted~~ suggestions of relaxation were made,

and the examination was quickly and successfully concluded.

In addition to the alleviation of fear, hypnosis can be utilized to get even greater cooperation from patients that normally ~~would~~ might be expected in certain procedures. The gag reflex can be brought under excellent control through hypnotic suggestion. Various other interfering movements of a semi-involuntary kind can be greatly influenced. An example is ~~the case of~~ an operation at this hospital recently for shortening of the medial rectus muscle of the eye, recently performed at this hospital. The patient was hypnotized, told to fix his gaze laterally, not to move his eye, and not to blink. ~~Anesthesia~~ Throughout the procedure lasting nearly 30 minutes he never blinked or moved, leaving the eye & lids considerably less traumatized than is usually the case in such a procedure.

Sometimes hypnosis can be employed to circumvent a surgical procedure. For example, the author has seen two cases where phrenic crush for persistent hiccups was about to be performed, after all other methods had failed. In each case hypnosis was successfully employed to stop the hiccuping. Neither of these cases was uremic.

Dr. West says
He has seen attempts to stop hiccuping in uremia by hypnotic suggestion which were briefly successful, but the hiccuping soon began again; usually the hiccuping of uremia cannot be influenced by hypnosis.

Various habits and practices which are harmful to a patient may be influenced beneficially through employment of hypnosis. It has been used successfully by dentists in cases of habitual grinding of the teeth, and habitual tongue-thrusting which was deforming the dental arch. Patients with peripheral vascular disease who are harming themselves by inability to stop smoking can be easily helped to break the habit. I have often felt that there is a vast, unexplored area in preventive medicine which is a logical outgrowth of this ~~situation~~ type of hypnotherapy. It is difficult to estimate the number of unnecessary medical examinations, surgical procedures, clinic visits, adjustments of insulin dosages, revision of dressings, and even additional or repeated surgical procedures, which arise from the failure of the patient to faithfully follow the directions of the physician. This is particularly seen in institutional practice, whether it be a state university hospital or an Air Force base hospital. Some effective program for suggesting to a patient

In closing, the author would like to remark that the possible ~~usages~~^{uses} of hypnosis in the practice of any physician are ~~numerous~~^{numerous}, and can only be defined in terms of management of each individual problem. You can never tell when it might come in handy. Perhaps it will enable ~~you~~^{you} to get a gall-bladder patient to ~~keep~~^{stick} to her diet and lose 25 pounds, so that she becomes a better operative risk. Perhaps it will enable ~~him~~^{you} to do a tonsillectomy under local instead of resorting to general anesthesia in a fearful adolescent with a hyperactive gag reflex, again diminishing the risk. Perhaps it will prove a godsend in the delivery of ^a tuberculous mother, with a failing rheumatic heart, of her 9-pound infant. ~~Exxpxxx~~ Let us hope nobody in this room ever finds himself in a position similar to the Australian surgeons in the prison camps. But let us remember that these men were surgeons; they knew just enough about hypnosis to induce a trance. ~~Max~~ They had seen it demonstrated in medical school. Anyone can learn to do the same; no special gifts are required. It is a shame that ~~more~~ the medical schools are not ~~accorded~~ providing ~~for~~ an hour somewhere in the curriculum to acquaint ~~the~~ students with the technique of producing hypnosis, and ~~with~~ a few general principals connected with its employment in the framework of ^{general} medical practice.

We are fortunate today in having Col. Tarrow, the chief of anesthesiology at Lackland Air Force Base Hospital, to demonstrate hypnosis for us. And for those who are interested, a few general principles might be listed briefly as follows:

1. Hypnosis should never be used for entertainment or fun; the sooner we get laws against that sort of thing (as they recently have in England), the better.
2. Hypnosis is essentially a safe procedure, and the hypnotized individual is basically the same as he was before. If all suggestions are made for therapeutic or ~~medicat~~ other medical reasons, no untoward reactions will ordinarily be seen.
3. If a patient is paranoid, or you fear he's mentally ill, better not try to hypnotize him.
4. In hypnosis, as in any technique employed in medicine, experience is the best teacher. Use it occasionally when it isn't really necessary, and you'll be more confident when you really need it sometime.

Thank you.

Chemrophyl Associates

P. O. Box 8176
Southwest Station
Washington 24, D. C.

Sherman C. Grifford

2 July 1953

Major Louis J. West
210 Fairchild Lackland Village
San Antonio, Texas

My Good Friend:

I returned from a brief vacation in Maine to find your letter of 11 June on my desk. I had been awaiting your next communication with considerable anticipation and curiosity. Frankly, I had been wondering whether your apparent rapid and comprehensive grasp of our problems could possibly be real. A considerable portion of your letter indicated that you have indeed developed an admirably accurate picture of exactly what we are after. For this I am deeply grateful.

I am proceeding to take action on developing a practical modus operandi in the following way:

(1) I am today dispatching a letter to Dr. Hastings enclosing a copy of your communication and suggesting to him an early conference here in order to make our initial assault on the top brass in your outfit.

(2) In regard to the remarks you make about the advisability of your having some leeway in this purchase let me advise that it will be possible to setup a separate sum of money to be given to you personally for such matters.

(3) It seems to me that it would be useful for me to obtain Top Secret clearance from our organization for Steele, Brua and Cowles. We may not favor to bring them in on the whole story but it would be wise to be in a position to do so when and if this becomes necessary. For this purpose I would appreciate receiving by return mail the following information on each of these personalities.

- (a) Their full name and title
- (b) Their date of birth
- (c) Their title of their present job
- (d) Their serial number

I gather from your letter that you do not look with favor on attempts to have you maneuvered out of the Air Force very soon. This would be difficult to do in any case but I want to know from you whether or not Hastings and I should possess this as an alternative to the top brass here in the eventuality that they think it impossible to develop this project within the Air Force structure.

In the interest of getting this note off promptly I will relegate further discussion for a future personal contact which I hope I can arrange before too long.

I feel that we have gained quite an asset in the relationship we are developing with you. We will work this thing out one way or another. It is of the greatest importance to do so.

Most Sincerely,

Sherman C. Grifford

Sherman C. Grifford

HYPNOSIS IN MODERN SURGERY

Louis J. West, Major USAF(MC)

It isn't very often that a Psychiatrist gets an opportunity to address a surgical group. When he does, the members of the audience cannot always be expected to express vast degrees of enthusiasm for what their esteemed colleague may have to report. This is easily understood if one considers the disparity of everyday activity of surgeons and psychiatrists. The surgeon is the most practical of the medical tribe. He deals with palpable realities. He repairs the human machinery; sometimes he reconstructs it; nowadays he occasionally may even supply spare parts. He does a job which all can see, and nobody can deny it's done when it's done.

Pity the lot of the poor psychiatrist by comparison. He may comfort himself by rather fuzzy analogies, comparing words to scalpels, but the fact of the matter is that there is very little for him to hold in his hand and inspect, either before or after the treatment is concluded (if, indeed, it ever is concluded). The tools of his trade are few, and he has to make the best of them. I recently saw a psycho-analyst friend hurrying down the street, balancing a couch on his ~~hand~~^{head}. I said, "Where ^{the Dickens} are you going with that couch on your ~~head~~^{head}?" He said, "Oh, I'm just making a house-call!"

Now, when the psychiatrist talks to surgeons, he often isn't much help. If he tells them that ulcerative colitis has an emotional basis, they may agree, but the colon still has to come out after a certain point. If he tells them that peptic ulcers (including his own) result from unsatisfied dependent strivings, they may agree again. But when it bleeds, or when it perforates, no parenteral preparations of libido or motherly love appear to be available to repair the damage magically, and the surgeon still has to go into the belly, ^{just} as if he were completely ignorant of the principles of Freudian psychology.

If we look back twelve decades, we find that surgeons were just as practical a lot as they are today. Perhaps they were luckier in a way, for there were no psychiatrists on hand in those days to take up their time at an otherwise perfectly normal surgical meeting. At any rate, they had very real problems to face in the

patching-up of people. One big problem was the problem of pain. This wasn't a problem because the patient felt it. It was a problem because the patient howled and shrieked, squirmed and wiggled, jerked and leaped about, at the very moments when the operator would liked to have had everything quiet and peaceful. With this problem in mind, imagine the reaction of the British surgical societies when a perfectly respectable member of their group began to write articles about the use of hypnotism (which he called "magnetism") in preparing patients for surgery.

During the 1830's and 40's James Esdaile, a British Surgeon, performed over a thousand minor and three hundred major operations, including 19 amputations, upon hypnotised or "magnetised" patients. He claimed that his patients offered no complaint of pain, lay quietly and apparently asleep during the surgery, and were often quite surprised to discover (upon awakening) that the operation which they had dreaded was all finished. Esdaile reported that his patients failed to show changes in pulse rate, respiration, and pupillary dilatation usually considered objective signs of pain. Most important, however, was the fact that one did not need to tie the patient with great ropes, get him drunk, give him a bullet to bite, and then have eight stout men hold him still during the surgical procedure. ~~Maximilian~~ Another Englishman, James Braid, a general surgeon, was the first to describe the essential nature of hypnotism as we know it today. He gave it the name we now use, and pointed out that it was a purely psychological phenomenon having nothing to do with ~~magnetism~~ planetary magnetism, animal magnetism, special devices or particular wavings of the arms and rollings of the eyes.

then have eight strong men hold him still during the surgical procedures.

The considerable upsurge of interest in hypnotism among surgeons subsided rather quickly after the introduction of chemical anesthetic agents, and it has only been recently that interest has revived. But I think it most interesting to point out that it was a group of British surgeons who did the work which led directly to the development of the theories of psychoanalysis by Sigmund Freud. In a way, you surgeons have no-one but yourselves to blame.

To those of us who have an experimental and theoretical interest in hypnotic phenomena, it is gratifying to observe the increasing interest in hypnosis which has been evidenced by the various medical and surgical specialties during the past decade. There was a somewhat similar upsurge of interest during the first World War, but it quickly faded away during the twenties except for ~~except~~ the work of a few psychologists who did excellent basic research.

James Braid was a Manchester surgeon who experimented with "magnetism" after seeing a performance by a former pupil of Anton Mesmer. Braid decided that the phenomena had nothing to do with "animal magnetism" or any other mysterious influence passing through the atmosphere. He considered the phenomena to be purely psychological, and considered the technique to be of value for surgeons in their practices. In 1842 he offered to read a paper on the subject before the British Medical Association which was to meet in Manchester. The offer was rejected. In the same year another surgeon, Squire Ward, presented before the Royal Medico-Chirurgical Society of London a paper on amputations performed painlessly on a hypnotized patient. The paper was branded as ridiculous, as were Braid's reports of curing cases of contractures and deafness.

~~James~~ Braid ^{later} renamed mesmerism, or "animal magnetism", calling it hypnotism. He felt it could be used by doctors to produce important physical and ~~psychological~~ psychological effects. ~~In 1846~~ At about the same time the physician Elliotson, professor of Physick at the University College Hospital, was asked to resign because he chose hypnosis as his subject for the Harveian Oration of 1846. He left the College and founded a journal called the Zoist which dealt with hypnotism and cerebral physiology. Under his influence a number of ~~institutions~~ "Mesmeric Institutions" were formed in various parts of the British Isles. At the Institution at Exeter, Parker claimed to have hypnotized twelve hundred persons, performing on them a total of 200 painless operations.

James Esdaile, Meanwhile a British surgeon in India, was performing literally thousands of operations upon hypnotized patients. His reports included three hundred major operations and 19 amputations, and a governmental committee investigating his work returned a favorable report. Esdaile claimed that his patients offered no complaint of pain, lay quietly and apparently asleep during the surgery, and were often quite surprised to discover (upon awakening) that the operation was all over. Esdaile also reported that his patients failed to show changes in pulse rate, respiration, and pupillary dilatation usually considered objective signs of pain. Most important to the average surgeon was the fact that one did not need to tie the patient with stout ropes, get him drunk with brandy, give him a bullet to bite,

-2-

by only modification to remain in the Air Force 210 Fairchild Street would be to satisfy the publication which is "published" at Lackland Village, San Antonio, Texas. If my work on these experiments could be discontinued by a separation from the service, I would remain in the service until the experiments would be retarded. I would supply return to civilian status with the feeling 17 July 1953 (as stipulations Sherman C. Grifford). If the project were to be developed outside of the Air Chemophyll Associates it would be important for me to be completely freed of P.O. Box 8176 and obligations. Since I have over 6 years of active military duty including no civilian life. My goal is to continue within a academic program.

Dear S. G.,

Thank you for your good letter of 2 July. I hope you had a pleasant vacation in Maine. As elsewhere the necessarily dictates, it will be with the definite feeling that sooner or later I shall submit my resignation and that will be the information you requested about the important local individuals is as follows:

Brigadier General Wycliffe E. Steele 491A (born 11 September 1904)
Commanding General, Training (as you can see) maneuvered out of the Air Lackland Air Force Base, Texas-type maneuver, which will insure we move to make room for the long-range pursuit of this entire body of research.

Colonel Robert S. Brua 19063A (born 3 August 1906)
Commanding Officer, 3700th Medical Group body of work on which you are engaged in a basic and Lackland Air Force Base, Texas one. Any services that I can render, along these lines you have indicated or in any other way, are kindly and sincerely
Colonel Herbert N. Cowles 1003A (born 22 April 1908) able in these terms.
Commanding Officer
Human Resources Research Center, working with recent interests,
Lackland Air Force Base, Texas

This information is derived from the January 1953 edition of the Air Force Register.

You have asked me to clarify my attitude about remaining in the Air Force to work on these experiments. I believe a general statement about my feelings in this regard is probably in order.

Louis J. Werth

It was necessary for me to accept a regular Air Force commission in order to take resident training in Psychiatry while a member of the military service. Theoretically I am entitled to submit my resignation at any time; the resignation can be accepted or rejected. In ordinary peacetime the resignation would be almost automatically accepted. However, resignations from medical officers are being accepted at a very slow rate at the present time. Also, there was an understanding at the time I took my commission that my resignation would not be accepted until I had spent a certain period of time on active duty. By this criterion, I have 3 years to go. I probably be best suited if you advised me of the military position as related thereto by signature.

I have no desire, careerwise, to remain in the Air Force. I intend to get out at the earliest possible date in order to return to full-time academic work at a university hospital, probably Cornell in New York City, where I can pursue both clinical and research interests. It was at Cornell that my previous experimental work on hypnosis was done. I believe that they want me to come back and that they would support continued research along the same lines. My work in hypnosis there was done quite independently, and in many ways such a situation (working as a member of the Cornell staff) would be ideal for many of the experiments that I envision.

Mr. John C. West
Psychiatrist

My only motivation to remain in the Air Force at the present time would be to satisfy the obligation which is "understood" as noted above. If my work on these experiments could be enhanced by a separation from the Air Force, or if remaining in the service meant the experiments would be retarded, I would happily return to civilian status with the feeling that patriotic obligations would be more greatly served in the work we have contemplated than in any routine military job. If the project were to be developed outside of the Air Force structure, I feel it would be important for me to be completely freed of further military obligations. Since I have over 8 years of active military duty in both enlisted and commissioned capacities, I feel no reluctance to return permanently to civilian life. My goal is to continue with a academic pursuits with an eventual professorship in mind.

If I remain in the Air Force, and undertake the projects within the military setting (either here or elsewhere as necessity dictates), it will be with the definite feeling that sooner or later I shall submit my resignation, and that ultimately it will be advantageous to continue the experiments on a civilian basis.

I hope this clarifies my position, and makes it plain that I have no fundamental objection toward being (as you put it) maneuvered out of the Air Force, so long as it is a permanent-type maneuver, which will leave me free to make plans for the long-range pursuit of this entire body of research.

It makes me very happy to realize that you can consider me "an asset". My interest in the entire body of work on which you are engaged is a keen and perhaps even a relatively enlightened one. Any services that I can render, along the lines you have indicated or in any other way, are gladly and eagerly offered. Surely there is no more vital undertaking conceivable in these times.

I am looking forward to our next meeting with great interest.

Sincerely yours,

Louis J. West
Major, USAF(MC)
Chief, Psychiatric Section
3700th Medical Group
Lackland Air Force Base
San Antonio, Texas

Security will probably be best served if you address me at the military address as noted beneath my signature.

My signature is attached to the right of this letter, and there is also a copy of my rank insignia.

This is my official signature for my personal and professional purposes, and should be used for all correspondence. It can be written either vertically or horizontally, and the rank insignia is to be placed directly beneath the signature.

At this time I am writing a memorandum to the Project Manager, and the Project Director, concerning the matter of my resignation.

216 Fairchild Street
Lackland Village
San Antonio, Texas

11 June 1953

Dear S. G.,

In the hypnosis research project there appear to be short-term and long-term goals. I have given considerable thought to both. They seem to include roughly the following:

A. Short-term goals

1. Determination of the degree to which information can be extracted from presumably unwilling subjects (through hypnosis alone or in combination with certain drugs), possibly with subsequent amnesia for the interrogation and/or alteration of the subject's recollection of the information he formerly knew.
2. Determination of the degree to which basic attitudes of presumably hostile or resistant subjects can be altered in an advantageous way, either immediately or in a "delayed-action" manner.
3. Elaboration of techniques for implanting false information into particular subjects, or for confusing them, or for inducing in them specific mental disorders.
4. Utilization of hypnotic techniques to determine accurately the methods of the enemy (counter-intelligence) where they may have used hypnosis or drugs upon our people who may not recall the experience. Especially in prisoners who appear to have been subjected to special influences, hypnotic methods may help in the analysis of the techniques that were employed to alter the ideas and attitudes of formerly loyal individuals.
5. Determination of the uses of hypnosis in special preparation of certain of our own workers, such as couriers. We should determine whether it is possible to implant in a courier's mind a long and complex message (code or straight) which he could repeat verbatim under specific circumstances only; to induce in him an amnesia for the message he carries so that he is not aware of it himself until the time comes to repeat it; to make a message torture-proof; to give the individual auto-hypnotic capacities to protect himself from painful stimuli under torture-type situations through self-induced anesthesia; to protect him from being hypnotized by anyone other than certain specified individuals.

B. Long-term goals

1. Acquisition of more basic scientific knowledge about the dissociated states in general, and the hypnotic trance in particular.
2. Measurement of the alterations which can be produced (by hypnotic methods) in bodily functions such as pain sensations and reactions, muscular capacity and fatigue, sensory acuity, and the effects of emotions upon the functions of various organ-systems.
3. Measurement of the alterations which can be produced in mental functions such as memory, ideation, motivation, attitudes, and feeling-states.
4. Study of the induction of trance-states by drugs, and their relationship to and usefulness in conjunction with hypnotic procedures.

There may be other applications for hypnotic methods which your everyday operations and knowledge of the overall problem might suggest. We can include such considerations in our experiments which, needless to say, must eventually be put to test in practical trials in the field.

At this time I am able to conceptualize experiments which will bear upon any (and

eventually all) of the above areas of inquiry. The practical establishment of such experimental procedures is, as you know, a considerable problem. I have attempted to analyze the specific considerations which will bear upon the successful construction and prosecution of these experiments.

A. My personal status. For the immediate future it might be practical for me to remain on duty here (although you can keep Texas in July and August!). As Chief of the Psychiatric Service I have sufficient independence to permit me to conduct the affairs of my department without having to answer to anyone in a detailed way; this will be crucially important in the operation of the experiments, as well as for security reasons. Since things have been going very well, and the reputation of the Psychiatric Service is steadily improving (it was in bad shape when I first took over), there should be little reason for interference with any particular activity within the department. This is particularly vital since it may be required at times to use patients as subjects, or to work with hospital personnel. In the military, of course, there is always a possibility that some older or higher-ranking medical officer might be assigned here and automatically put in charge of the Psychiatric Service. This would definitely jeopardize my effective operation of the experiments, and constitutes a danger which should be avoided at all costs.

I have been a Major now for over a year, but promotions are coming slowly these days and until I make Lieutenant-Colonel there will be this hazard. When promotion finally comes it will be a big help, because it will cut down considerably the number of people who can properly call me to account, it will markedly diminish the possibility of someone else being made Chief of Service over my head, and it will increase my capacity for getting things done at a local level. Since the Chiefs of most other services (Medicine, Surgery, Orthopedics, Medicine, Obstetrics, Laboratory, etc.) are Lieutenant-Colonels or Colonels, it is not inappropriate to hope that I'll get it eventually. In any case, we may find that the vicissitudes of military medicine preclude the successful completion of all our experimental goals in an Air Force situation. Sooner or later it will become necessary to continue on a civilian basis for a number of reasons. At that time I shall resign my commission, return to an academic position in a medical school or university hospital, and go ahead with the work on a long-term research project. Meanwhile, in the military, Lackland is as good as anyplace, so long as my position remains stable.

B. The status of the experiments. It is well-known here that I am experienced in the field of hypnosis, have published papers on the subject, lectured on it to local groups, and conducted clinical experiments in the hospital. My involvement in further activities with hypnosis should create relatively little comment. Rather than to attempt to conceal the fact that experiments are going on, the important thing will be to emphasize the fact that we are working on methods for utilizing hypnosis more widely in psychiatric treatment. Since effective short-term psychotherapy is so difficult at present, and hypnosis is already known for its value in treatment of war neuroses, our work will seem appropriate and sensible. But it can only be undertaken on the basis of a definite project, on a high-priority assignment direct from Washington, delegating to me the necessary authority to obtain subjects, working space, personnel, materiel, and equipment to do the job, and specifying my continuation as Chief of the Psychiatric Service. The project might be referred to as "Special Study of Hypnosis" or some similar designation.

C. Personnel. It will take some time for me to locate suitable personnel, who can be few in number but who must be reliable and well-qualified, to work on the project. It might be best if these individuals were assigned directly to my department, in jobs authorized by a revision in our present TD (Table of Distribution). With the well-publicized manpower shortage and the recent cuts in Air Force budget, it will require direct orders from high-level Air Force sources to create these jobs. If you wish I can send you the present detailed TD with recommended changes and additions. In particular it will be important for us to have enough Psychiatrists to do the local job well, leaving me with a definite portion of my time available for the experiments. We should have 10 Psychiatrists here. Two properly trained clinical psychologists and four carefully selected technicians would suffice for most of the experiments I have in mind. These jobs would have to be added to our present allotment of personnel.

D. Equipment and supplies which will give us help in certain psychological testing can because of lack of buildings, but because of lack of funds to make the buildings adequate for the purposes for which they are needed. We may need to make a few physical changes in whatever building is made available to us. We shall require special equipment (e.g. a Hardy-Wolff-Goodell thermal stimulator or "pain machine"; tape-recording equipment, galvanic skin response recording device; special testing materials, etc.), or drugs which are not on the Air Force list of standard preparations. Perhaps it might be advantageous if some of the equipment were presumably my personal property, so that I could purchase it without stating the usual extensive justifications and without waiting for requests to travel through far-flung channels for eventual approval or disapproval. Also, if the equipment were "mine" (actually "yours"), it would be easier to move it without red tape whenever it might become necessary to continue the experiments elsewhere. The matter of funds is a touchy one at best, even where small sums are involved, since the local budget is very tight. It would certainly be helpful if I could anticipate cooperation on a local level without having to explain in excessive detail the need for every item or gadget. Some sort of carte blanche from very high sources will be required for this. If we are to purchase equipment through local channels, the "Carte" will have to be very "blanche" indeed.

E. Subjects for the experiments.

1. Basic airmen. These might be obtained from the local units, if one has the authority to do so. The Human Resources Research Center is here, and they seem able to call up someone and say, "Send us 10 high I.Q. airmen at 0900 tomorrow", and get results. Perhaps we could obtain their cooperation in this present undertaking.
2. Volunteers (paid for their time) from permanent personnel. We already have several subjects available in this category: medical and dental technicians, nurses, and other hospital personnel. (Funds would be required to pay these people \$2 or \$3 hourly for their time). This in many respects is the best group, since these individuals are available for indefinite periods.
3. Patients. Certain patients requiring hypnosis in therapy, or suffering from dissociative disorders (trances, fugues, amnesias, etc.) might lend themselves to our experiments without any risk or special problems arising.
4. Others, possibly including prisoners in the local stockade, returned prisoners from Korea, or special subjects referred by you or others working in your field.

To summarize the items which would seem to facilitate the effective accomplishment of this mission at Lackland Air Force Base:

1. My continuation as Chief of Psychiatric Service at Lackland should be assured;
2. A promotion would help considerably;
3. The hypnosis research project should be designated as such by very high Air Force sources, with my responsibility and authority made clear, and with instructions to key local individuals to give assistance;
4. Funds should be made available, together with the authority to use them as required, to obtain equipment and drugs, pay subjects, and adapt local facilities to our special needs;
5. The TD of my department should be enlarged to provide for the assignment of additional psychiatrists, psychologists, and technicians;
6. Specific arrangements should be made with local authorities ensuring that space and subjects will be made available.

Three local individuals should be instructed by higher headquarters that this project is of special importance, and urged to lend it their support and cooperation:

1. Brig. Gen. Wycliffe E. Steele, base commander of Lackland AFB, known to be sympathetic with matters psychiatric and psychological.
2. Col. Robert Brua, the Wing Surgeon and Commanding Officer of the 3700th Medical Group which operates Lackland AFB Hospital; my boss. His cooperation will guarantee my continued independence as Chief of Psychiatric Service. I have the HRRC.
3. Col. Herbert N. Cowles, director of Human Resources Research Center here.

is independent of the base, and might give us help in certain psychological testing or other special procedures or devices.

At this point I do not see the necessity for obtaining special clearance for anyone else at this level. If anyone here should be cleared for more detailed information about the true nature of our mission, it should probably be Col. Brua. Dr. Hastings feels that it may be best to work through General Craigie in Washington; such high-level maneuvering I leave in his hands and yours. Enclosed is a copy of this letter for you to send to Dr. Hastings.

You asked me for a fairly detailed and well-considered report of my thoughts about this entire problem up to date, and I have complied with complete frankness. I am sure you will not misinterpret or misconstrue this as "empire-building" on my part. Here you have my honest evaluation of the very real problem before us, and of the realistic methods required to achieve a good solution. These experiments may be of extraordinary value, and I do not want to give them anything less than my best.

Sincerely yours,

Louis J. West
Major, USAF(MC)

ADDENDUM

Having re-read and re-considered and re-written the enclosed correspondence several times, I was ready to mail it today. It has become necessary for me to tear open the envelope in order to add information which changes the complexion of the local scene in an unfortunate way.

Our Chief of Neurology here, Major Robert Williams, is several years my senior professionally, although his experience in Psychiatry is considerably less than mine. Last month he was certified by the American Board of Neurology and Psychiatry in both specialties. (I am not taking the certification examinations until next spring, although I coached Williams for the Psychiatry section of his). After his certification he began eyeing the Psychiatric Service as fair game, and he has just persuaded Col. Brua to combine the departments of Neurology and Psychiatry into a Neuro-Psychiatry Service, with himself at the head. This is a most unhappy turn of events from the point of view of our experiments. Dr. Williams is extremely quisitive and will be an uncomfortably close scrutinizer of all my activities. The fact that I am still Chief of Psychiatry doesn't alter the fact that it is now merely a section in this new Service, and that many of my administrative and even professional decisions can be hamstrung. Since Dr. Williams is essentially a Neurologist and will continue to function as one, it is unlikely that he will see eye-to-eye with me on a number of topics. And, most unfortunately, he is one of those conservative traditionalists who actively opposes research or treatment involving hypnosis, states that it is "tampering with the soul", and spoken out against some of my previous work; he will undoubtedly hamper my efforts in many ways.

Since it has appeared that the new arrangement is in actuality less efficient than the old one where the two departments were separate and autonomous, I have appealed to Col. Brua today to restore the status quo. He declares that the thing must

be given a trial for one month to see whether it makes administrative procedures more efficient, etc. (which it won't), but Dr. Williams enjoys the sense of increased authority and he will oppose any further change, or a return to the previous state of affairs.

This sort of semi-political maneuvering is precisely the sort of thing that often happens in military medicine, and it is ironical that it should take place just after I foresaw the danger of it. I shall try to persuade Col. Brua to restore the status quo through logical argument, even though it means some local conflict. Since Col. Brua likes me very well personally, there may be some chance of success, but since I cannot discuss with him the reasons why this problem is so vitally important, I fear he'll see the situation as essentially a toss-up -- just a question of whom to keep happy in the hospital.

If this new situation is to continue, it might be extremely difficult to undertake the experiments down here at this time. The only other possible solution to the local impasse would be if Major Williams were transferred to another base. There is such a rapid turnover in the Air Force Medical Corps in the next 6 weeks that people are being reassigned and transferred all over the place. If Williams leaves, I'll be left in charge of the new combined department; in that case I'll put a Neurologist in charge of Neurology and let him run his own show, so that things will be much as before. There is a Neurologist just about to be assigned to Parks AFB, Dr. David Daley, a captain and an old friend from Minnesota. If I could trade him for Williams in some way, our troubles would be over down here, and we could go ahead with the experiment.

The ultimate solution to the repeated occurrence of this type of situational crisis is, of course, a return to civilian status. If I were back on the staff at Cornell Medical Center where my previous research was done, there would be no problem. I could receive some funds from you disguised as a U.S. Public Health Service grant or some such thing, go onto a half-time research basis, and plumb away at the problem with considerable independence. This future eventuality we'll have to discuss at a later date; meanwhile we have the local problem to solve. If someone in the Surgeon General's office, or the Surgeon General himself, were in on this whole complicated situation, it might make the solutions a little easier.

I'll continue to work on the situation down here, and will appreciate any help or suggestions from the powers that be.

Sincerely,

LJW

ADDENDUM

Having re-read and re-considered and re-written the enclosed correspondence several times, I was ready to mail it. It has become necessary for me to tear open the envelope in order to add information which changes the complexion of the local scene in an unfortunate way.

There is a movement afoot to combine the department of Psychiatry with that of Neurology. If this is done, I shall lose my present valuable degree of autonomy to a slight but annoying degree, since the chief of Neurology, Maj. Robert Williams, is professionally "senior" (board-certified in both Neurology and Psychiatry) although his experience is less extensive than mine in Psychiatry proper. What will ensue is a department of Neuropsychiatry in which there will be a Psychiatry section, but all decisions about utilization of manpower, etc., will be Dr. Williams'; he'll always have the last word. Without going into the local political shenanigans which brought this about, I can tell you that it is on a one-month trial basis now, and that I plan to oppose it in favor of the previous system. The reasons for this are that it is essentially less efficient than the present set-up (i.e. two autonomous services), Dr. Williams is essentially a neurologist and isn't likely to see eye-to-eye with me on a number of points, and finally, he is opposed to hypnosis. He is one of those conservative traditionalists who actively deplores research or treatment involving hypnosis, states that it is "tampering with the soul", and has definitely spoken out against it.

I intend to try to get Lt. Col Carlos Alden, chief consultant in Neuropsychiatry, to make a statement that the maintenance of two separate departments of Neurology and Psychiatry is justifiable in cases where local conditions make it advantageous in any way, and to send such a statement to Col. Brua here. I also intend to attempt to persuade the local people to return to the former way of doing things. If unsuccessful in this, it will be much more difficult to operate the experiments, but we shall do so nevertheless, dealing with local friction as best we can. As long as there is support from Headquarters USAF, and I am delegated the necessary authority and permissions, there is no reason why we cannot go ahead.

The ultimate solution to the repeated occurrence of this type of situational interference is, of course, a return to civilian status. I plan to return to full-time University work as soon as my resignation will be acceptable (there is a theoretical understanding that I won't resign for 3 more years). If I were back on the staff at Cornell Medical Center where my previous hypnosis research was done, there would be no problem. I could receive some funds disguised as a U.S. Public Health Service grant or some such thing, go onto a half-time research basis, and plug away at the problem with considerable independence. This future eventuality we'll have to discuss at some later date.

Meanwhile, let's get on with it as best we can. If someone in the Surgeon General's Office, or the Surgeon General himself, were in on this problem, the local problem would be a lot easier to solve! Well, I'll work on it, appreciating any help or suggestions from the powers that be.

Sincerely,

LJW

PROPOSAL FOR CLINICAL RESEARCH, AFR 80-22

STUDIES IN MEDICAL HYPNOSIS

Initiating Officer and Principal Investigator:

Major Louis J. West USAF (MC)

Chief, Psychiatry Section

3700th USAF Hospital

Lackland Air Force Base, Texas

Responsible Officer:

Col. Robert S. Brua USAF(MC)

Commander

3700th USAF Hospital

Lackland Air Force Base, Texas

I. STATEMENT OF THE PROBLEM

There is evidence to show that the clinical applications of hypnosis are widely known, and include a variety of aspects which have potential practical importance for the Air Force. Recent publications have made it increasingly clear that scientific knowledge about hypnotic phenomena is still regrettably limited.

Further investigation is required to clarify the usefulness of hypnosis and its potential scope of application in military as well as civilian medical practice.

Lack of basic research and lack of standardization of techniques have resulted in a failure to capitalize the advances resulting from

In clinical psychiatry, a variety of syndromes may be treated in previous military experience with hypnotherapy of the neuroses, parallel brief therapy employing hypnosis as an adjunct. In psychotherapy, hypnotherapy anxiety reactions, conversion reactions, phobias and dissociative neuroses offers, in selected cases, certain definite advantages. These include: rapid control of symptoms (enabling a man to remain on the job during treatment); facilitation of the establishment of good rapport and positive attitudes; a "short-cut to the unconscious" permitting the therapist to understand basic personality structure and to make more rapid and valid decisions regarding prognosis and disposition; and a device which often shortens even brief psychotherapy considerably by producing good results quickly. The basic psychiatric aspects of these frequently

Pioneering uses of hypnosis in treatment of psychoneurosis (hysteria) led to our entire modern concept of neurotic illness and its therapy in dynamic psychiatry. Following the rise of psychoanalysis, hypnosis fell into disuse and, to some extent, disrepute. It became a toy for enter-

tainers and a welcome tool for charlatans and quacks. However, during the

Recent studies of the effects of hypnotic suggestion upon various two world wars, its use in military medicine increased markedly because of challenging group of "psychosomatic" disorders. Controlled use of

its value in treatment of war neuroses. There is evidence to show that the hypnotic-suggestive component of "narcoanalysis" is of vital importance to the success of that method. Many of those who used narcoanalysis report preference for hypnosis where possible, because of the greater control over the patient and his productions. The use of drugs in producing trance-like states is still poorly understood.

Lack of basic research and lack of standardization of techniques have resulted in a failure to consolidate the advances resulting from previous military experience with hypnotherapy of the neuroses, particularly anxiety reactions, conversion reactions, phobias and dissociative reactions. Related to the dissociative reactions are a group of poorly understood syndromes which include "fascination", "fixation" and other alterations of concentration and reactivity which have particular significance in aviation medicine. There can be no doubt that these reactions underlie a certain and perhaps significant percentage of the "pilot error" tragedies. Yet data concerning the basic psychiatric aspects of these frequently observed phenomena are not available. The essential similarities between these trance-like states and the hypnotic trance are too striking to be dismissed; hypnosis offers the only laboratory method for the study of this type of reaction.

Recent studies of the effects of hypnotic suggestion upon various bodily functions have indicated several possible approaches to the challenging group of "psychosomatic" disorders. Controlled use of

emotional forces through hypnosis can be employed to study the effects of various emotions upon bodily functions. Critical and definitive explorations along these lines remain to be done. The corollary to these studies lies in the application of hypnotic methods for therapeutic purposes in treatment of the somatization reactions. This has been done sporadically for a century; yet our scientific understanding of the mechanisms involved remains negligible, and standardized or well-documented procedures are lacking.

IV. ~~APPLICATIONS IN THE FIELD OF AIR FORCE PERSONNEL, WHICH DEMAND THE INTEGRATION~~

of ~~the~~ ~~use~~ ~~of~~ ~~hypnotic~~ ~~methods~~ ~~in~~ ~~the~~ ~~treatment~~ ~~of~~ ~~psychoneurotic~~ ~~personnel~~ ~~in~~ ~~valuable~~ ~~salvageable~~ ~~people~~.

Hypnototherapy may provide such a method.

B. In other areas, even less definitive data are available to help us in the development of workable approaches to a very large group of cases: the behavior disorders and immaturity reactions. Study is needed of the effects of hypnosis and scientifically planned suggestions upon the attitudes, motivations, behavior patterns, and morale of many individuals presently classified as "emotionally unstable", "passive-dependent", "inadequate Personality", "immaturity with symptomatic habit formation", etc. At this time little information is available on the use of group suggestive therapy in such cases, not to mention individual methods. Yet the scientific use of controlled suggestion in influencing or changing unhealthy attitudes might prove to be a most valuable method.

In summary, the problem is that we possess too little scientific knowledge about a subject which offers us a valuable approach to greater value in altering unhealthy attitudes and in increasing our understanding of basic psychobiology, and from which could come practical applications.

and clinically valuable techniques covering a wide area of psychiatric

B. With growing awareness of the importance of mental health in the

optimal utilization of the Air Force's incal-

pment of all kinds, and the importance of mental

and general medical practice. The aim of the proposed research is to follow up on recent preliminary attempts to overcome our ignorance in this field.

II. REQUIREMENTS, IN TERMS OF AIR FORCE NEEDS, WHICH JUSTIFY THE INVESTIGATION

- A. Because of the chronic shortage of psychiatrists, there is a need for more effective short-term psychotherapeutic methods in treatment of psychoneurotic reactions in valuable, salvagable people. Hypnotherapy may provide such a method.
- B. There is a need for new approaches to treatment of somatization reactions, and for better understanding of the effects of emotions on bodily functions. Hypnosis offers a valuable tool for studies in this area.
- C. There is a need for investigation into the dynamics and mechanisms involved in dissociative reactions, with particular reference to brief trance states and states of "fixation" or "fascination" which often affect flyers. The hypnotic trance is the only dissociated state which can be adequately studied by laboratory methods.
- D. There is a need for new approaches to problems of motivation, attitude and maturity of personality, in order to prevent the loss of or inefficient utilization of potentially valuable airmen, especially in time of full mobilization. Hypnotic methods may prove of great value in altering unhealthy attitudes and in instilling healthy motivations.
- E. With growing awareness of the importance of human factors involved in optimal utilization of the Air Force's increasingly complex instruments of all kinds, and the importance of human engineering, any

III. Research which leads to better understanding of personality functions)

and malfunction is justified in terms of its eventual contributions to the total mission.

Hypnosis has figured as a tool, or has itself been the object of study. Out of these researches have come publications which provide a general background for the currently proposed investigation.

Walberg⁽¹⁾ and Ross⁽²⁾ have provided a good orientation to the uses of hypnosis in clinical psychiatry. Watkins⁽³⁾ describes in some detail the use of hypnosis in treatment of war neuroses. Emerson and Gill⁽⁴⁾ give an exhaustive review of literature regarding hypnosis as a therapeutic agent. Recently Schneck⁽⁵⁾ has edited a volume covering applications of hypnosis in a number of medical specialties.

Garten⁽⁶⁾ prepared a review of literature dealing with alterations of physiological functions through hypnotic suggestion, as well as physiological aspects of the hypnotic trance itself. Experiments clarifying the effects of hypnotic suggestion upon pain were conducted by West et al.⁽⁷⁾. These references offer a general background for the proposed research.

All modern authors seem agreed that the science of hypnosis is still in its infancy, that much of value is still to be learned both from practical and theoretical viewpoints. In the words of Schneck: "...not much more is known today about the basic issues of the hypnotic state itself and hypnotic phenomena than were quite well known to earlier workers... Many advances have been made in the applications of hypnosis but even so, much of the work has continued to be exploratory. It seems clear at this time to those workers deeply interested in the subject of hypnosis as a

III. BRIEF SUMMARY OF BACKGROUND OF THE INVESTIGATION (INCLUDING REFERENCES)

A. In the past decade there have been a number of researches in which hypnosis has figured as a tool, or has itself been the object of study. Out of these researches have come publications which provide a general background for the currently proposed investigation.

Wolberg⁽¹⁾ and Rosen⁽²⁾ have provided a good orientation to the uses of hypnosis in clinical psychiatry. Watkins⁽³⁾ describes in some detail the use of hypnosis in treatment of war neuroses.

Brenman and Gill⁽⁴⁾ give an exhaustive review of literature regarding hypnosis as a therapeutic agent. Recently Schneck⁽⁵⁾ has edited a volume covering applications of hypnosis in a number of medical specialties.

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All modern authors seem agreed that the science of hypnosis is still in its infancy, that much of value is still to be learned both from practical and theoretical viewpoints. In the words of Schneck: "....Not much more is known today about the basic issues of the hypnotic state itself and hypnotic phenomena than were quite well known to earlier workers....Many advances have been made in the applications of hypnosis but even so, much of the work has continued to be exploratory. It seems clear at this time to those workers deeply interested in the subject of hypnosis as a

field of scientific study, that areas for future investigation keeping pace as they do with parallel scientific developments, have virtually no bounds. Continued efforts along these lines should produce data regarding hypnosis that will be of great practical value and assist also in contributing to a more complete understanding of personality in general."

B. References

1. Wolberg, L.R.: Medical Hypnosis. New York, Grune & Stratton 1948.
2. Rosen, H.: Hypnotherapy In Clinical Psychiatry. New York, The Julian Press 1952.
3. Watkins, J. G.: Hypnotherapy Of War Neuroses. New York, Ronald 1949.
4. Brenman, M., and Gill, M.: Hypnotherapy. New York, Internat. Univ. Press 1947.
5. Schneck, J. M.: Hypnosis In Modern Medicine. Springfield, Ill., C. C. Thomas 1953.
6. Gorton, B. E.: The Physiology of Hypnosis. Psychiat. Quart., 23: 317-343, 457-485, 1949.
7. West, L. J., Niell, K. C., and Hardy, J. D.: Effects Of Hypnotic Suggestion On Pain Perception And Galvanic Skin Response. Arch. Neurol. & Psychiat., 68: 549-560, October 1952.

IV. RESEARCH DESIGN

A. Specific tasks within the research design are enumerated below; they represent a variety of approaches to practical and theoretical questions for which we are seeking answers. Underlying any clinical research, however, there should be basic long-term goals which lend perspective, shape, and direction to the overall scientific inquiry. The basic long-term scientific goals which underlie this research project may be listed as follows:

1. Acquisition of basic scientific knowledge about the dissociated states in general, and the hypnotic trance in particular.
2. Study of the induction of trance-states by drugs, and their relationship to and usefulness in conjunction with hypnotic procedures.
3. Measurement of the alterations which hypnotic methods can produce in bodily functions such as muscular capacity and fatigue, pain sensations and reactions, other sensory functions, and the effects of emotions upon the physiology of various organ-systems of the body.
4. Measurement of the alterations which hypnotic methods can produce in mental functions such as memory, ideation, motivation, attitudes, emotions and feeling-states.

Research design in this area must be flexible enough to permit the pursuit of unexpected leads which may arise, and to allow shifts of emphasis or adaptation of methodology according to the capacities of the experimenters, availability of certain types of equipment and other materials, and the number and character of

experimental subjects.

B. Studies in hypnotherapy

1. Psychiatry. The available case-material will determine many of the details of research design in this area. Emphasis will be laid upon hypnotherapy of cases which fall into definable groups, thus permitting use of controls and eventual statistical analysis of results. Brief hypnotherapeutic methods, dynamically oriented, will be employed. Attention will be paid to effects of various drugs upon the hypnotic state. Standardization of methodology will be evolved in terms of the most effective techniques, with a view toward eventual sharing of information with other workers throughout the Air Force who may benefit from such knowledge. A training film in hypnotherapeutic technique could eventuate from this area of study.
2. General Medicine. In obstetrics, anesthesiology, ophthalmology, surgery, dermatology, internal medicine, and dentistry, there have been hypnotherapeutic experiments of considerable interest. Lacking still are effective criteria for selection of subjects, and analysis of the mechanisms involved in successful procedures. For example, it is known that in addition to producing analgesia, a dentist can alter blood flow and salivary flow in the mouth by hypnotic suggestion. The neuophysiological and psychological aspects of these phenomena remain little understood. To study the mechanism of alteration of salivary flow, one must measure amounts of salivary secretion, alterations of viscosity and pH of saliva, and other autonomic effects. Research design and specific studies to be undertaken in these areas will depend upon available case-material and the degree of cooperation available from already overworked professional and technical personnel.

C. Studies in basic phenomenology of hypnosis. (The type of approach is exemplified in the details given regarding hypnotizability. Other studies are merely listed to demonstrate the scope of approach.)

1. Hypnotizability. Criteria for selection of suitable subjects for hypnosis are unclear. Personality characteristics of the hypnotizable vs. unhypnotizable individual are unknown with only a few exceptions. To obtain greater information along these lines, large groups of "normal", fairly standardized subjects should be studied. These groups must be given a variety of psychological tests. Controls derive from within the group. Attempts must be made to hypnotize the entire experimental sample. Correlations may then be made of objective test findings with hypnotizability and depth of hypnosis in each case, and statistical analysis of the data will be possible. Inasmuch as extensive testing programs involving basic trainees are now underway at this base under auspices of H. R. R. C., coordination with their activity would seem desirable and constructive. Psychometrics involved should include: (1) quantitative personality scales, such as the Minnesota Multiphasic Personality Inventory; (2) Language-free intelligence scales, such as Raven's Progressive Matrices; (3) Projective devices; (4) Biographical data to include items not yet devised; and (5) Psychophysiological measurements such as those afforded through measurement of galvanic skin response and critical flicker fusion levels. These data should be collected, if possible, on every subject seen in the entire project. For purposes of statistical evaluation, however, standard groups as described above are particularly desirable.

2. Induction of trance states in resistant subjects (to include relative effectiveness of various induction techniques, use of various drugs, etc.)
3. Effects of hypnosis on memory and learning (extensions of Hull's classical experiments).
4. Effects of hypnosis on attitudes and motivation ("before & after" comparisons using standard quantitative criteria, and probably involving original psychometric devices specially designed for the purposes of the experiment).
5. Effects of hypnosis on mood and feeling states (extensions of Sweetland's experiments — J. Gen. Psychol., 1948).
6. Effects of hypnosis on pain (extensions of previous experiments by the writer; special attention to hyperesthesia and "hallucinations" of pain).
7. Alterations of autonomic function by direct hypnotic suggestion; comparisons with "conditioned responses" involving autonomic reactions (e.g. alterations of size of pupil to hallucinated light vs. light-associated conditioned stimulus).
8. Comparisons of waking, hypnotic, and narcoanalytic suggestions in the same subject.
9. Measurements of effects of various emotions upon bodily functions through use of hypnotically created and controlled emotional states.
(Examples: a. Gastric motility —balloon kymograph—; b. Muscle tension and fatigue —electromyograph, plessimetry—; c. Sympathetic components to various emotional reactions —galvanic skin responses—; d. Alterations of electroencephalographic tracings by anxiety. Etc.)

V. REQUIREMENTS

A. Experimental Subjects

It is clear that the foregoing research design in many of its aspects requires a pool of hypnotic subjects to be available for specific investigations. In the hypnotizability studies any portion of the flow of basic airmen may suffice. For much of the remainder, limited groups of individuals may be utilized. Sources of such subjects are listed as follows:

1. Basic airmen, found to be suitable in the course of studies of larger groups. Limited because of requirements of basic training.
2. Paid volunteers from permanent party personnel. Has the advantage of stable, long-term availability. Could be scheduled for minimal job-interference during their off-duty hours, etc. Should be paid \$2 per hour.
3. Patients (see IV., A.)
4. Others, possibly including stockade prisoners or special volunteers.

B. Facilities

Several sizeable offices and laboratories will be required.

These must accommodate subjects being given psychological tests, those undergoing hypnosis, housing of special apparatus, etc. At least one air conditioned laboratory room will be necessary for experiments involving electromyography or galvanic skin response. Space may be available in H.R.R.C. area, in the hospital, or both.

C. Personnel

The principal investigator should be free to devote half-time to this research project. One additional psychiatrist, experienced in hypnosis and able to devote at least half-time to the project should be assigned to the Psychiatry Section, 3700th USAF Hospital.

(Recommendation: First Lieutenant Bernard E. Gorton, USAF (MC), presently assigned to Sheppard Air Force Base, has been active in the field of hypnosis for several years.)

In addition, two well-qualified clinical psychologists, three neuropsychiatric technicians, and one clerk-typist should be assigned to the project.

VI. ITEMS OF REQUIRED NON-STANDARD EQUIPMENT

It is not known whether all of the items listed are non-standard.

Some may be available for use through facilities of USAF School of Aviation Medicine, H.H.R.C., or elsewhere. Some equipment (electroencephalograph and electromyograph) is available at 3700th USAF Hospital.

	Rough Estimate of Cost
A. Physiological Equipment	
1. Galvanic Skin Response Measuring and Recording Device	250
2. Flicker-fusion Test Apparatus*	350
3. Wolff-Hardy-Goodell Radiant Heat Dolorimeter	300
4. Pressure Dolorimeter	50
5. Balloon Kymograph	20
B. Tape recorder with microphone, reproducer unit (audio), and supply of tapes	450
C. Phono motor and turntable for group visual fixation device	15
D. Psychological Test Materials	
1. Raven's Progressive Matrices (#20 booklets, #4 Scoring manuals)	50

* Using adaptation of Halstead unit modified from a Type 631-B

General Radio Strobotac as electronic source of variably intermittent light, with improvements as suggested by Landis.

IX. INFORMATION CONCERNING PRINCIPAL INVESTIGATOR

A. Identification

Major Louis J. West USAF(MC)

Chief, Psychiatry Section 3700th USAF Hospital

Lackland Air Force Base San Antonio, Texas

B. Background

B.S. 1946, M.B. 1948, M.D. 1949; all U. of Minnesota.

Medical Internship, U. of Minnesota Hospitals, 1948-49.

Psychiatric Residency: Payne Whitney Clinic of The New

York Hospital and Cornell University Med. College, 1949-52.

Assistant in Psychiatry, Cornell U. Med. College, 1950-52.

C. Memberships

American Psychiatric Association; American Psychosomatic Society

Society for Clinical and Experimental Hypnosis

New York Academy of Sciences; Aero Medical Association

Association of Military Surgeons of the United States

American Medical Association; A. A. A. S.

D. Publications

1. Effects of Hypnotic Suggestion on Pain Perception and Galvanic

Skin Response (with Niell, K.C. & Hardy, J.D.) Arch. Neurol.

& Psychiat., 68, October 1952, 549-560.

2. Measurement of Changing Psychopathology with the Minnesota

Multiphasic Personality Inventory. Am. J. Psychiat. 109:

June 1953 922-928.

3. Effects of Mephenesin on Emotional States. Psychosom Med (in
press)

4. An Evaluation of Subcoma Insulin Therapy (with Greaves, D.C.)

to be read at 1954 meeting of American Psychiatric Association.